Spring 2018

"Out in the Open and Free": Nature-Based Settings and Literacy Learning at Adventure-Risk-Challenge

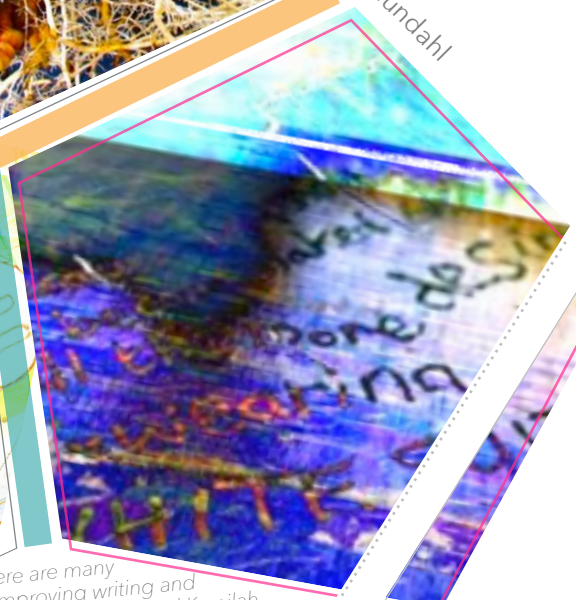
Merrilyne Lundahl

"out in the open and free": nature-based settings and literacy learning at adventure-risk-challenge

merrilyne lundahl

triptych 5.d-iv :: IN WHICH . . .

environment binds the writer to potentials, embodying rhetorical ecologies and re-socializing the processes of meaning-making



There are many routes to improving writing and ARC capitalizes on them. Grace and Kamilah . . . received individual support, took their writing through multiple drafts, got specific and timely feedback, had a sense of audience and purpose, and wrote from prompts that drew on concrete aspects of their physical environments and emphasized the self.

"Out in the Open and Free": Nature-based Settings and Literacy Learning at Adventure-Risk-Challenge

Merrilyne Lundahl

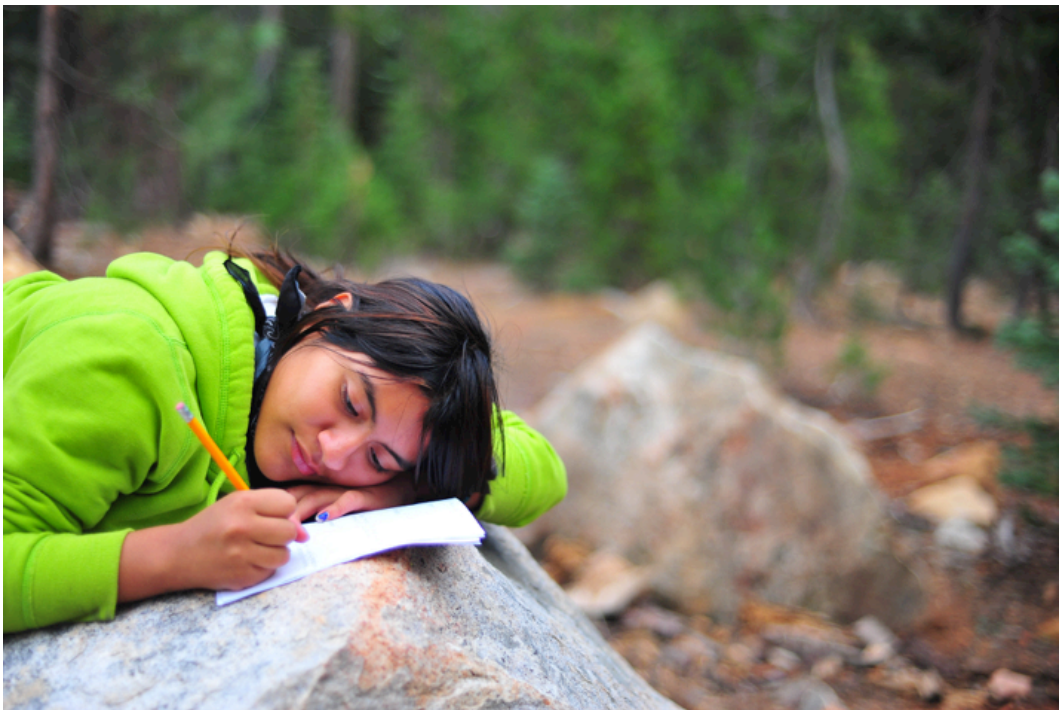
> *Out there we were just out in the open and free and now we're in classrooms where it's a little bit more enclosed. You feel like you're in a little box trying to think, but out there in the whole wilderness where we were, it was a little more open and easier to think really well. (Enrique, Adventure Risk Challenge Participant)*

Just as "setting" is often defined as the background where action occurs in literature, setting is often in the background in education practices and research despite intuitive notions that setting impacts learning. Many scholars and practitioners in English Studies have made the public turn, taking their curriculum and pedagogies outside of the classroom and into local communities (e.g. Flower, 2008; Mathieu, 2005). Still others assume the value of field experiences, service learning, and place-conscious education (e.g. Adler-Kassner, Crooks, and Waters, 1996; Brooke, 2003; Reynolds, 2004). We know that what happens in our classrooms is a tiny portion of the learning students do. Shirley Brice Heath (2002) describes learning as life-long, constant, and not singularly defined by the setting of school. She explains: "Outside the physical barriers and arbitrary limits of education, the concept of learning unrestricted by time and place is an ancient and instinctive one" (vii). "Time and place" is the most basic definition of setting, and I am interested in understanding how setting impacts literacy teaching and learning. What does it mean when students perceive themselves as "enclosed" in a classroom or "out in the open and free" in nature?

I work from the premise that settings influence social relationships, affective experiences, and cognition, all key aspects of literacy learning. Some students are alienated from learning due to their negative associations with school spaces and school literacies; dramatically changing the learning setting has potential to reconnect students with literacy learning. I make this assertion based on a study I conducted on a literacy and leadership program, Adventure Risk Challenge (ARC). Participants like Enrique experienced shifts in their literacy-based practices, attitudes, and identities, and moving from "enclosed" classrooms to "out there in the whole wilderness" seemed to facilitate those shifts by providing new, often enabling experiences and messages.

As a qualitative researcher seeking to understand a holistic system, I saw relationships among setting, social dynamics, curriculum, and pedagogy as symbiotic

and associated, not causal. The interpretation of my data suggests that, at ARC, nature-based settings encouraged empathetic social relationships, allowed for positive emotions, and made it easier for students to think and write. Taken together, these effects contributed to implicit, positive messages about self, literacy, and learning. Although the literacy practices students engaged at ARC were not significantly different from the literacy practices of school, students articulated a very different experience of those practices at school and ARC settings. In this article I focus on nature-based settings as a mediator of students' literacy learning and draw from my findings to suggest opportunities for enhancing student learning.

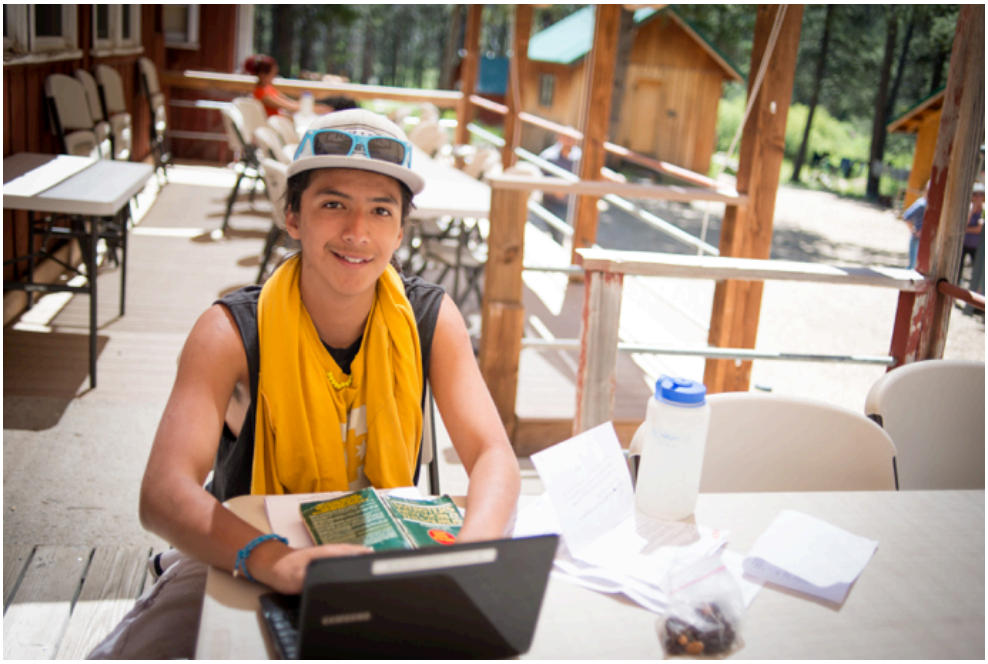


Background & Methods

ARC is a nonprofit organization that serves California high school students, most of whom are English Language Learners, Generation 1.5, eligible for free and reduced lunch, and will be the first in their families to attend college. ARC offers 24- and 40-day summer programs; students live at basecamps within the University of California Natural Reserves system and go on multi-day backpacking expeditions in the Sierra. The organization describes itself as an "integrated literacy and leadership" program; the academic literacy components include instruction and practice in language, reading, writing and speaking. The leadership components of the program are primarily located in the outdoor adventure curriculum, which includes rock-climbing, kayaking, rafting, a challenge/ropes course, and backcountry travel.

I investigated ARC because I was interested in its claims of integrating literacy, civic aims, and place. I worked closely with ARC leadership and my institutional review board to plan a robust and ethical study. My research design saw ARC as a case study, and I used ethnographic methods such as participant observation and interviews. I embedded with ARC during the spring and summer of 2015. My participant observation included the role of grammar (now Language Power) instructor, which involved adapting the grammar curriculum for a shorter course and delivering it through seven, hour-long lessons. Additionally, I took charge of students' independent reading time, helping them select books and having informal conversations with them about reading strategies and interests. These formalized roles were important for reciprocity and also enabled me to be more authentically integrated into the organization. As a participant observer, I also took part in the backcountry all-staff training trip, a backpacking orientation trip with staff and potential student participants, the preparation work prior to students' arrival, all of the students' basecamp days, their rock climbing and ropes course experiences, their final backcountry expedition, and the post-course debriefing. Throughout these experiences I took field notes; because I sometimes was so immersed as a "participant," my field notes included jottings throughout the day that I fleshed out during spare moments. These field notes were coded for emerging themes and led to the development of interview questions.

After completing the participant observation, I conducted 19 semi-structured interviews with ARC alumni and two with ARC instructors. Interviews were transcribed and coded as part of my analysis; I consolidated codes into categories of community, emotion, pedagogy, place, self, and writing, and worked to develop a theory about the impact of nature-based settings on students' writing.



Implicit Learning: Hidden Curriculum of Settings

Settings implicitly communicate messages to learners, but there is little research investigating what messages students take from nature-based instructional settings. A useful framework for thinking about the role of setting in shaping student learning is the idea of a hidden curriculum. The hidden curriculum exists alongside and underneath a formal curriculum and refers to the transmission of values, attitudes, beliefs, and habits that work to socialize children in ways that, at minimum, maintain the status quo. In English Studies, scholars have looked at the hidden curriculum in relationship to genre (Finke, 2004) and testing (Booher-Jennings, 2008), but much of what critical pedagogy and rhetoric does can be seen as uncovering hidden curricula and working to expose power relationships and to enact more socially just pedagogies. In the preface to *The Hidden Curriculum and Moral Education*, editors Henry Giroux and David Purpel explain that while it is generally assumed that schools socialize and there exists a hidden curriculum, what is actually worth investigating is the "function and consequence of such a curriculum" (ix); my study considers the "function and consequence" of a hidden curriculum in nature-based settings.

The connotation of "hidden curriculum" is usually negative as the "lessons" students learn from schooling tend to stifle identity, reinforce arbitrary structures, foster dependency on authority figures, and eliminate self-reflection in addition to maintaining systems of injustice. In contrast to my participants' experiences at high school, the "hidden curriculum" of nature-based settings at ARC impacted students' literacy learning in positive ways. They escaped the oppressive messages of their high-school environments and had powerful, often corrective, experiences that allowed them to take up more enabling messages about self, literacy, learning, and future opportunities. Those messages, and the differences between school and ARC settings, are summarized in Table 1.

School Settings	ARC's Nature-Based Settings	Role of Setting at ARC	Implicit Messages from ARC Settings
Functional Safe Irrelevant to curriculum	Inspirational Risky Major curricular component	Community-building; self-reflection & identity development; aids in generating ideas & concentration; elicits positive emotions; mandates relevant transitions and structures; facilitates toggling between concrete & abstract; integrates experiences	Who I am and where I am are related; I care about and for a place; I have many strengths; I can take responsibility for my actions in this place; I can think of things to write about; subjects are interrelated; we are all just human animals

Table 1: Setting and Implicit Learning at ARC and at school

Nature-based Settings as a Pedagogical Aid

All of my informants, regardless of their initial strengths going into the ARC summer program, reported changes in their writing. Grace, who recently became the first college graduate in her family, participated in a 40-day summer course. She explained that ARC offered her "a very intimate space to work on my writing skills… Now I am a better writer. I feel very confident." Another 40-day alumna and first generation college graduate, Kamilah, described a drastic change in her attitude about writing after ARC: "I [hated] writing before. Now it's one of my strongest [subjects]." There are many routes to improving writing and ARC capitalizes on them. Grace and Kamilah benefitted from how ARC works with students to improve writing: they received individual support, took their writing through multiple drafts, got specific and timely feedback, had a sense of audience and purpose, and wrote from prompts that drew on concrete aspects of their physical environments and emphasized the self. Their writing and their feelings about writing developed within a community of writers and within a context of rapport between teachers and students. Students at ARC write a lot, they read their work, and through reading instruction, they pay attention to the moves of published writers. In writing studies and education, we recognize the value of these practices and work to implement them as much as possible into our various pedagogies. The writing instruction Grace and Kamilah received at ARC is not exclusive to nature-based settings. However, ARC instructors have an additional pedagogical route to aid in writers' development: nature-based settings and time.

Over the past two decades the value of "nature" has received more scholarly and popular attention. Empirical studies in the fields of health and urban planning suggest, for example, that green space leads to a greater sense of well-being (Maas, 2006) and that people heal more quickly when they can see plants (Ulrich, 1991). In a review article that sought to categorize the intangible benefits of nature to humans, Russell et al (2013) conclude that, "The effects of nature on mental and physical health have been rigorously demonstrated, whereas other effects (e.g. on learning) are theorized but seldom demonstrated" (473). In the following sections, I draw from my findings to shed light on how nature-based settings impacted literacy learning through social, affective, and cognitive domains.

Nature-based Settings and Relationships

Organizations like ARC have different constraints than formal school settings: programs can organize around a specific and limited mission, participants have made the choice to be involved, the instructor-to-student ratio is lower, and instructors and cohorts of participants spend more time together. At ARC, nature-based settings were used to facilitate community building and positive self-

development. The associated dynamic I observed, and that participants spoke to, was one of greater empathy and a sense of freedom in being oneself. Participants experienced the social setting of ARC very differently than their school settings: they were encouraged to get to know people across differences and to be more open about themselves. Setting was instrumental in building community, both through the wilderness and literacy components of the program.

I define community building as deliberate strategies to encourage perspective taking, enhance empathy, and develop interpersonal communication and conflict resolution skills. These are not dependent on a wilderness setting, but ARC used setting to build community. The settings and activities, like backcountry travel, required strong teamwork. Participants must work together to find appropriate routes, campsites, kitchens, and bear hangs, and then they work together setting up shelters, cooking meals, and storing food. They work together to cope with blisters, avoid dehydration, and maintain a pace that works for the group while meeting goals like reaching sites before dark or making a peak ascent. Molly explained, "It's all about helping each other. Like if we don't help each other, we're never going to get to where we're going to go."

Backcountry travel also encouraged conversations. When I asked Sebastian about the notion of freedom that many participants referenced, he responded by talking about a social freedom:

> I think the sense of freedom comes from just being free to talk about whatever you want, whatever is on your mind, especially when you're hiking for a long amount of time. … just let those walls down and get to know each other.
>
> I remember hiking, and we would hike in a single file line, and I remember … just kind of talking in between us, so I guess it's like a freedom to talk about whatever you want and get to know each other even though you're completely strangers.

For Sebastian, time on the trail encouraged conversation and helped build friendships and a larger sense of community. Participants often crossed the lines established in their high school social orders: Mexican, White, African American, and Asian kids became friends, as did students in honors classes and those in special education; students with significant trauma in their backgrounds became friends with those of very different backgrounds; kids who had never stepped out of line connected with those who had criminal records. One alumnus explained that the setting acted as an equalizer: "When a group of people, like twelve of us are in nature together, it gives you the idea that we're all human beings, we all have the same feelings, we all have the same thoughts."

Relationships at ARC were also forged through the curriculum components that focused on communication and self-awareness, and these curricular aims often

drew from nature-based settings. Participants moved naturally between adventure activities, academic work, self-reflection, and group discussions. One English lesson that brought together self, community building, writing, and setting was Heavy Rock/Light Rock. A seasoned English instructor, Jess, described that she worked to "incorporate the setting into the teaching, so that where [students] are is integral to what they're doing." The goals of the lesson include teaching metaphor and simile. Students identify burdens and values in their life through comparison to a heavy and a light rock in the surrounding environment. The prompt includes directions to "describe what weighs you down in life" and asks, "Is there any heavy part of yourself or your life that would like to leave behind/not have to deal with anymore?" for the heavy rock, and for the light rock students are invited to describe "what makes you happy in your life" and to think about goals (English Journal s15, 2015). This is a lesson that sets the stage for much of the sharing ARC students do, and participants talked about how impactful it was to hear the personal stories of their peers and how they learned that you should "never judge." Many of my participants also talked about feeling like others "had my back" in a way they hadn't experienced before. Though they struggled to articulate it exactly, participants had a sense that the setting of this lesson allowed them to be more open in sharing. One alumna, a refugee from a war-torn country, told me that the settings helped with relationships because "there was so much more trust" and being in nature allowed people to feel a sense of peace and freedom.

The settings of programs like ARC can shift relationships between instructors and students. In the summer I was a participant observer, Ezra emerged as one of the group's natural leaders. He was charismatic, athletic, and wise. When he seemed bored, disengaged, and would distract others in my language power class, I recognized that "grammar" was an aspect of ARC that challenged and frustrated him—he gave up easily, was convinced he couldn't get it, and acted like he didn't care. In a school setting, my evaluation of him would likely be less favorable than what it was at ARC. Instead, I could see that he experienced the class as mundane and he didn't know how to transfer the lessons from high-intensity, dramatic activities to everyday challenges. Being with Ezra in different settings and witnessing his strengths kept my expectations and engagement high.

For some students, classroom settings automatically create antagonism between themselves and the teacher. This was the case for Alberto, who explained:

> "I feel like in the classroom, a student goes in with the mindset to go against the teacher and just be another person…when they go into a classroom they go in with this mindset of I have to act this way or I have to say these things or I don't have to participate…"

The sense of having to be a different person did not follow Alberto to ARC, where he felt respected as himself and could offer that to others. Molly respected her ARC instructors because she saw the setting they had her in as a privilege:

> You're sitting outside [in] nature, laying down [on this] yoga mat in the middle of trees everywhere, [and] you're doing school. Like, we wouldn't fall asleep because we know to respect them, because look at where they have us, we are enjoying having [these] privileges."

Nature-based settings at ARC, from the challenges the setting provides to the time and space students find within those settings, helped students forge relationships with peers and teachers that felt supportive and authentic.

Nature-based Settings and Positive Emotions

Most models of the role of emotions in learning indicate that emotions like interest and challenge facilitate learning, while emotions such as high anxiety inhibit it (e.g. Bazerman, 2011; Pekrun, 1992). Studies in motivation and education indicate the importance of "competence, autonomy, and relatedness" and suggest that when these are missing, learning suffers (Ryan and Deci, 2000). My participants reported experiencing feelings that enhanced their learning, such as connection, gratitude, and self-confidence. They reported that the nature-based settings at ARC often led to a sense of peace, freedom, and inspiration. Participants' feelings map onto several components of well-being including meeting innate human needs of autonomy, competence, purpose, growth, and identity (Russell et al, 2013). School, however, was not a place participants associated with a similar sense of well-being. Instead, they felt judged, invisible, "like a cog in a machine," antagonistic, and bored. Such negative feelings at school may have led to negative expectancies and attitudes about school literacies.

Many ARC students did not identify as readers, writers, or see themselves as competent in the English language. Kamilah "hated writing essays." Grace was "very sensitive with [her] grammar" and "just such a poor writer." Luis explained that when he went to ARC, his "writing skills weren't that good, my speech, my talking wasn't that well." He "wasn't a very strong student, but [he] also didn't really try or

ask questions because [he] felt stupid." These participants credited dramatic changes to ARC; Kamilah started to identify writing as one of her best subjects, Grace discovered value in informal writing, and Luis gained confidence in speaking up. Though delineating direct relationships between settings, affect, relationships, and the whole of students' experiences at ARC is not possible, I suggest that the positive feelings participants attributed to their nature-based settings helped facilitate literacy gains.

Participant discourse about natural settings eliciting positive feelings aligns with what studies from psychology to urban planning and much of human history suggests: being in nature, even with its potential physical discomforts, feels good. It often alleviates stress and puts people in contact with feelings of awe, gratitude, belonging, and a sense of calmness or peace. When I asked Enrique why he thought setting may have been important to his learning at ARC, he replied, "This is kind of cheesy, but just the beautiful positivity going around." Alberto reported that, "nature helped me a lot to have my thoughts unroll because I wasn't worrying about anything." Loie asserted, "writing in nature is always easier" because your mind "goes to peace" and "it feels right." Participants expressed how the freedom and peacefulness they felt in nature "gets your mind flowing." Sofia described how setting impacted her writing:

> I could just [do] writing, like creative writing, like the detail. … It was because I was out there exposed to a different environment, the trees, writing peacefully…. You find a nice rock, a nice view. On one side there's a sunset that's bright and beautiful. On the other side, it's all gloomy. It touches your feelings and inspires you to write different things.

Sebastian, when reflecting on what he remembered from writing in the various settings at ARC, explained:

> …you sit on a rock or a log, and you're just thinking, and it goes back to being reflective of whatever experiences you've been through. It's also inspiration… It's almost like bliss. There's quiet, there's birds. … It's just a setting that inspires ideas. … It's just peaceful.

When students experienced positive emotions or relief from painful emotions, their writing often flourished. It opened the door to inspiration and helped students generate ideas.

When participants contrasted ARC with school settings, they indicated that their schools prohibited a sense of freedom or autonomy and provided few opportunities for inspiration. Chloe talked about being "forced to go to school" where she "[felt] like it's just the same thing over and over everyday." She compared writing at ARC to writing at school:

> It just felt really cool writing out in the wilderness. In a classroom it's way different. It's just four walls, and a whole bunch of people. I can't really think

> when I'm in a classroom. When I went out there I felt like I could really write, and express myself how I wanted to.

My participants' positive feelings in nature helped them experience writing tasks differently, and some took up messages about literacy learning as more pleasant and something they were able to do with greater ease. They experienced "freedom," "bliss," and "inspiration" while doing academics in nature that they did not encounter in school.

Nature-based Settings and Cognition

My participants also reported being more creative, more energetic, and having higher concentration when working outside. Chloe was one of many participants who credited nature-based settings with greater ease in thinking. She explained that writing outside "would give [her] more stuff to write about." It allowed ideas in in a way she didn't experience in classrooms, where she "can't really think." When I asked Enrique to elaborate about the "beautiful positivity" and being able to think more clearly, he explained:

> I think it's just the fact that you know you're outside, and that … Pretty much you're just in an infinite space now. So you just feel kind of … Your mindset is just easier to wander and go out there. You're more open to everything and just willing to take everything in and concentrate as well as you can

For Enrique and so many others, ARC was associated with freedom. He makes a shift from the external environment, which is "infinite" and open, to himself—he personally becomes more open. The external space seemed to allow participants like Enrique to feel more at ease internally. Willingness to engage the processes of learning, including frustration, expanded with more space. For all students, and perhaps particularly for those like Enrique who have an individualized educational plan, the willingness to tolerate frustration, to not shut down in the face of difficulty, is key to learning.

One way of understanding these students' experiences is by turning to research on nature and attention. Attention Restoration Theory (ART) posits natural settings require a less-demanding type of attention than the attention required by academic literacies, called directed attention. Directed attention is essential in information processing, and it "requires effort, plays a central role in achieving focus, is under voluntary control (at least some of the time), is susceptible to fatigue, and controls distraction through the use of inhibition" (Kaplan 170). Writing and other literacy tasks, particularly if not in one's first language, require directed attention that is difficult to maintain and leads to mental fatigue. According to ART, being in natural settings allows for this direct and focused attention to be "restored." Experimental design studies have demonstrated that time spent in different types of

environments—walking in a park vs. along a busy street, for example—influences subsequent attention. The result is that "after an interaction with natural environments, one is able to perform better on tasks that depend on directed-attention abilities" (Berman, Jonides, and Kaplan, 2008). Participants at ARC are continuously interacting with natural environments; they may be taking intuitive breaks that refuel their attention for the cognitive demands of writing.

Interesting surroundings also led to better description and fueled creativity, something Naomi and her peers experienced. She offered the example of a writing exercise from the first expedition, when the group was at

> …This one lake and there was this dead white tree reaching upward to the sky. It was really cool looking; it looked like a claw I thought, and we were describing it and everybody came of with these different descriptions, whereas if you were in the school and you asked someone to try [to describe] the wall, they'd be like, 'white brick.'

Importantly, the settings helped students manage distractions, particularly those from technology and social media. Josiah explained that the setting made it so participants were "isolated from the rest of the world, you know it kept us away from phones, computers, so it kept us really on track to concentrate on what we were doing." He also suggested a type of mindful presence:

> You just felt like you're just here and now, there's nothing to distract you and so I think it's really helpful and that's one of the things I remember, that it was just really helpful to be outside because you get to focus and it's peaceful and it's quiet.

My participants' discourse revealed synergy and integration, where settings created positive feelings and provided novelty to enhance students' experiences of writing. For some students, the settings offered concrete topics to write about, and the curriculum invited them to go back and forth between their direct experience and more abstraction. The settings also facilitated greater concentration, both by eliminating distractions and by allowing for attention restoration during and after the highly demanding, directed attention required by writing.

Switching the Setting: Creating Spaces for Enabling Messages

David Orr (1993), an environmental studies and education scholar, articulates the hidden curriculum of built campus environments. He argues that the spaces of classrooms and lecture halls "do little to lift the spirit, stir the imagination, fuel the intellect, or remind us that we are citizens of ecological communities" (227). The natural settings of ARC do what built environments, including schools, do not. But what does that mean for the masses of students and teachers who do not have access to places and programs such as ARC? As I conducted my research, I wondered what it meant to teach and learn in settings perceived as "open and free"

or "enclosed." My participants attributed their "open and free" nature-based settings to positive feelings and better thinking, and I noticed how the setting provided opportunities for community building and self-reflection. Students indicated they strongly valued the relationships they developed at ARC, and that sharing time and place—and the experiences fostered by their settings—was integral to forming those relationships.

A major pattern of responses from participants in my study suggests that a key impact of their ARC experience was a shift in beliefs about their literate selves. Some participants saw themselves as ready to take the risk of being the only Hispanic in their AP or honors courses, some started thinking for the first time that college was possible, most started to view writing as more of a process and began to feel more confident in themselves as English Language Arts students. They could look around and generate ideas; their own observations and experiences could make for compelling writing. Peers, teachers, and larger audiences responded encouragingly to their work. They experienced writing in a more relaxed setting and writing just felt easier. These changes seem to be a result, more than anything, of well-established, effective writing pedagogies. I have had many students in my first year writing courses indicate similar changes in their beliefs about themselves as literate beings—and those courses were taught in classrooms on college campuses.

Nature-based settings at ARC helped students write for all the reasons (and likely others) I've described. Because most practitioners won't be teaching in settings like those at ARC, what seems a valuable postulation is that *changing the setting*—from high school to a summer program, or from high school to first year writing in college—invites students to counter some of their negative associations with high school. Secondary teachers, fighting against those associations, might design their classroom spaces and create learning experiences that invite novelty. The less "school" like the school, the better students might be. Better still is to draw from Attention Restoration Theory and the growing research on green space—open windows if we have them, and decorate with plants and posters of natural places. We can use setting as an active participant in our teaching. Writing marathons, like those Casey Olsen runs for his students in Montana, powerfully impact student writers. And wherever we are, we should work to build relationships.

Writing and other literacy tasks, particularly if not in one's first language, require directed attention that is difficult to maintain and leads to mental fatigue. According to ART, being in natural settings allows for this direct and focused attention to be "restored." Experimental design studies have demonstrated that time spent in different types of environments—walking in a park vs. along a busy street, for example—influences subsequent attention.

REFERENCES

Adventure Risk Challenge. (2015). "s15 student journals." Private Dropbox.

Adler-Kassner, L., Crooks, R. & Waters, A. (Eds). (1996). *Writing the community: Concepts and models for service-learning in composition.* Sterling, VA: Stylus Publishing.

Berman, M. G., Jonides, J, & Kaplan, S. (2008). The cognitive benefits of interacting with nature. *Psychological Science,19*(12), 1207-1212, https://doi.org/10.1111/j.1467-9280.2008.02225.x

Brooke, R. E. (Ed.) (2003). *Rural voices: Place-conscious education and the teaching of writing.* New York, NY: Teachers College.

Bazerman, C. (2011). Writing, cognition, and affect from the perspectives of sociocultural and historical studies of writing. In Berninger, V.W. (Ed.), *Past, present, and future contributions of cognitive writing research to cognitive psychology* (89-104). New York, NY: Taylor & Francis Group.

Booher-Jennings, J. (2008). Learning to label: Socialization, gender, and the hidden curriculum of high-stakes testing. *British Journal of Sociology of Education*, *29*(2), 149-160, doi:10.1080/01425690701837513

Christensen, L. (2000). *Reading, writing, and rising up: Teaching about social justice and the power of the written word.* Milwaukee, WI: Rethinking Schools.

Finke, L. (2004). The Hidden Curriculum. In J.R. DiLeo (Ed.), *On anthologies: Politics and pedagogies,* Lincoln, NE: University of Nebraska Press.

Flower, L. (2008). *Community Literacy and the Rhetoric of Public Engagement.* Carbondale, IL: Southern Illinois University Press.

Giroux, H.A., & Purpel, D.E. (1983). *The hidden curriculum and moral education: Deception or discovery?* San Pablo, CA: McCutchan Publishing Corporation.

Heath, S.B. (2002). Foreword. In G. Hull & K. Schultz (Ed.), *School's out: Bridging out-of-school literacies with classroom practice.* New York, NY: Teachers College Press.

Kaplan, S. (1995). The restorative benefits of nature: Toward an integrative framework. *Journal of Environmental Psychology*, *15,* 169-182, http://dx.doi.org/10.1016/0272-4944(95)90001-2.

Maas, J., Verheij, R. A., Groenewegen, P. P., de Vries, S., & Spreeuwenberg, P. (2006). Green space, urbanity, and health: how strong is the relation? *Journal of Epidemiology and Community Health*, *60*(7), 587–592. http://doi.org/10.1136/jech.2005.043125

Mathieu, P. (2005). *Tactics of Hope: The Public Turn in English Composition.* Portsmouth, NH: Boynton/Cook Publishers.

Orr, D.W. (1993). Architecture as pedagogy. *Conservation Biology*, *7*, 226-228, doi: 10.1046/j.1523-1739.1993.07020226.x.

Pekrun, R. (1992). The impact of emotions on learning and achievement: Towards a theory of cognitive/motivational mediators. *Applied Psychology*, *41*, 359–376. doi:10.1111/j.1464-0597.1992.tb00712.x

Reynolds, N. (2004). *Geographies of Writing: Inhabiting Places and Encountering Difference.* Carbondale, IL: Southern Illinois University Press.

Ryan, R.M., & Deci, E.L. (2000). Self-determination Theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78, http://psycnet.apa.org/doi/10.1037/0003-066X.55.1.68.

Russell, R., Guerry, A.D., Balvanera, P., Gould, R. K., Basurto, X., Chan, K.M.A., … Tam, J. (2013). Humans and nature: How knowing and experiencing nature affect well-being. *Annual Review of Environmental Resources*, *38*, 473-502. https://doi.org/10.1146/annurev-environ-012312-110838

Ulrich, R.S., Simons, R.F., Losito, B.D., Fiorito, E., Miles, M.A., & Zelson, M.I. (1991). Stress recovery during exposure to natural and urban environments. *Journal of Environmental Psychology, 11*, 201-230. http://dx.doi.org/doi:10.1016/S0272-4944(05)80184-7